

AMENDMENT

IN THE CLAIMS

Please amend claims 1-4 as indicated in Appendix A submitted herewith according to the proposed revision to 37 C.F.R. §1.121 concerning a manner for making claim amendments.

REMARKS

Claims 1-4 are presently pending in the captioned application with claims 1-4 being amended.

Claims 1-4 have been amended into method claims. Support for the amendments can be found in Example 1 of the specification. In particular, Example 1 shows that the addition of additive DG-1, DG-2 or DG-3 of the present invention to a solvent borne paint as disclosed in Table 5 prevents the occurrence of a whitening phenomenon. No new matter within the meaning of §132 has been added by any of the amendments.

Also, Applicants submit a certified English translation of Japanese priority document JP 2000-255720 filed on August 25, 2000, thereby perfecting Applicants' claim to foreign priority under §119.

Finally, Applicants hereby proffer an English translation of the cited reference JP 10158336 to show that the cited reference fails to teach a method for preventing a whitening phenomenon.

Accordingly, Applicants respectfully request the Examiner to enter the amendments and reconsider and allow all claims pending in this application in view of the following arguments.

1. Rejection of Claims 1-2 and 4
under 35 U.S.C. §102(b)

The Office Action rejects claims 1-2 and 4 under 35 U.S.C. §102(b) as being anticipated by JP No. 10-158336 or U.S. Patent No. 4,219,632 ("Simms"). The Office Action states:

Pending translation, and using machine translation, it is noted that JP 10-158336 discloses additive for paint which is a copolymer obtained from 30-80 % C₂-C₂₂ alkyl (meth)acrylate and 20-70 % 2-isocyanoethyl methacrylate (claims 4 and 9, paragraphs 7-9 and 25).

Alternatively, Simms discloses additive for paint that is a copolymer obtained from 25-75 % C₂-C₂₂ alkyl (meth)acrylate and 25-75 % 2-isocyante ethyl methacrylate (col.1, lines 7-10 and 50-64 and example 1).

In light of the above, it is clear that JP 10-158336 or Simms anticipate the present claims.

Applicants respectfully traverse the rejection because neither

JP No. 10-158336 or Simms teach the presently claimed new method for preventing a whitening phenomenon for solvent-borne paints as presently claimed.

Turing to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

But where the claims are drawn to a new method of using either an old or "obvious" composition, wherein the method has unobvious beneficial or useful effects, the new method claims are patentable even though the composition itself could not be patented. Rohm and Haas Company v. Dawson Chemical Company, Inc. et al., 217 USPQ 515 (D.C. S. Texas 1982) (citing In re Shetty, 566 F.2d 81, 195 USPQ 753 (C.C.P.A. 1977); In re Legator, 352 F.2d 377, 147 USPQ 322 (C.C.P.A. 1965)).

In the present application, independent claim 1 recites a method for preventing a whitening phenomenon for solvent-borne paints for paint or ink, which is characterized by comprising a copolymer of 2-50% by weight of a reactive monomer having

isocyanate group or an isocyanate-derived group with 98-50% by weight of other monomer or polymer which is reactable with said reactive monomer.

However, nowhere do either of JP No. 10-158336 or Simms teach a method for preventing a whitening phenomenon for solvent-borne paints. Applicants proffer a full English translation of JP No. 10-158336, which will be forwarded as soon as it is received.

JP No. 10-158336 only teaches an additive for paint which is a copolymer obtained from 30-80 % C₂-C₂₂ alkyl (meth)acrylate and 20-70 % 2-isocyanoethyl methacrylate. Nothing in JP No. 10-158336 relates to a method for preventing a whitening phenomenon for solvent-borne paints. Clearly, JP No. 10-158336 fails to teach each and every claimed limitation of presently pending claim 1.

Similarly, Simms teaches an additive for paint that is a copolymer obtained from 25-75 % C₂-C₂₂ alkyl (meth)acrylate and 25-75 % 2-isocyante ethyl methacrylate. Again, nothing in Simms relates to a method for preventing a whitening phenomenon for solvent-borne paints. Clearly, Simms fails to teach each and every claimed limitation of presently pending claim 1.

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by either of JP No. 10-158336 or Simms and request the Examiner to reconsider and withdraw the

§102(b) rejection.

2. Rejection of Claims 1-2 and 4
under 35 U.S.C. §102(b)

The Office Action rejects claims 1-2 and 4 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,608,314 ("Turpin et al."). The Office Action states:

Turpin et al. disclose additive for paint that is a copolymer obtained from at least 5 % m-isopropenyl- α - α -dimethylbenzyl isocyanate and 30-95 % alkyl (meth)acrylate (col.2, lines 42-63, col.3 lines 40-53, col.4, lines 7-9, and 23-24, and col.11, 49).

In light of the above, it is clear that Turpin et al. anticipate the present claims.

Applicants respectfully traverse the rejection because Turpin et al. does not teach the presently claimed new method for preventing a whitening phenomenon for solvent-borne paints as presently claimed.

Turning to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re

Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

But where the claims are drawn to a new method of using either an old or "obvious" composition, wherein the method has unobvious beneficial or useful effects, the new method claims are patentable even though the composition itself could not be patented. Rohm and Haas Company v. Dawson Chemical Company, Inc. et al., 217 USPQ 515 (D.C. S. Texas 1982) (citing In re Shetty, 566 F.2d 81, 195 USPQ 753 (C.C.P.A. 1977); In re Legator, 352 F.2d 377, 147 USPQ 322 (C.C.P.A. 1965)).

In the present application, independent claim 1 recites a method for preventing a whitening phenomenon for solvent-borne paints for paint or ink, which is characterized by comprising a copolymer of 2-50% by weight of a reactive monomer having isocyanate group or an isocyanate-derived group with 98-50% by weight of other monomer or polymer which is reactable with said reactive monomer.

However, nowhere does Turpin et al. teach a method for preventing a whitening phenomenon for solvent-borne paints. Turpin et al. only teaches an additive for paint that is a copolymer obtained from at least 5% m-isopropenyl- α - α -dimethylbenzyl isocyanate and 30-95 % alkyl (meth)acrylate. Nothing in Turpin et al. relates to a method for preventing a whitening phenomenon for

solvent-borne paints. Clearly, Turpin et al. fails to teach each and every claimed limitation of presently pending claim 1.

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by Turpin et al. and request the Examiner to reconsider and withdraw the §102(b) rejection.

3. Rejection of Claims 1-2 and 4
under 35 U.S.C. §102(b)

The Office Action rejects claims 1-2 and 4 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,533,681 ("Cassatta et al.") or EP 610534. The Office Action states:

Cassatta et al. disclose copolymer obtained from 0.5-20 % isocyanatoethyl methacrylate, 0.5-20 % hydroxyalkyl methacrylate, and 60-90 % alkyl methacrylate (col.2, lines 51-66, col.8, lines 57-63, and col.9, lines 20, 25-26, and 54-65).

Alternatively, EP 610534 discloses additive for paint that is a copolymer obtained from 5-40 % isocyanatoethyl methacrylate and 0-80 % alkyl (meth)acrylate (page 2, lines 35-43 and 54-56, page 3, lines 5-10, and claim 2).

In light of the above, it is clear that Cassatta et al. or EP 610534 anticipate the present claim.

Applicants respectfully traverse the rejection because neither

Cassatta et al. nor EP 610534 teach the presently claimed new method for preventing a whitening phenomenon for solvent-borne paints as presently claimed.

Turing to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

But where the claims are drawn to a new method of using either an old or "obvious" composition, wherein the method has unobvious beneficial or useful effects, the new method claims are patentable even though the composition itself could not be patented. Rohm and Haas Company v. Dawson Chemical Company, Inc. et al., 217 USPQ 515 (D.C. S. Texas 1982) (citing In re Shetty, 566 F.2d 81, 195 USPQ 753 (C.C.P.A. 1977); In re Legator, 352 F.2d 377, 147 USPQ 322 (C.C.P.A. 1965)).

In the present application, independent claim 1 recites a method for preventing a whitening phenomenon for solvent-borne paints for paint or ink, which is characterized by comprising a copolymer of 2-50% by weight of a reactive monomer having

isocyanate group or an isocyanate-derived group with 98-50% by weight of other monomer or polymer which is reactable with said reactive monomer.

However, nowhere do either of Cassatta et al. or EP 610534 teach a method for preventing a whitening phenomenon for solvent-borne paints. Cassatta et al. only teaches a copolymer obtained from 0.5-20 % isocyanatoethyl methacrylate, 0.5-20 % hydroxyalkyl methacrylate, and 60-90 % alkyl methacrylate. Nothing in Cassatta et al. relates to a method for preventing a whitening phenomenon for solvent-borne paints. Clearly, Cassatta et al. fails to teach each and every claimed limitation of presently pending claim 1.

Similarly, EP 610534 only teaches an additive for paint that is a copolymer obtained from 5-40 % isocyanatoethyl methacrylate and 0-80 % alkyl (meth)acrylate. Again, nothing in EP 610534 relates to a method for preventing a whitening phenomenon for solvent-borne paints. Clearly, EP 610534 fails to teach each and every claimed limitation of presently pending claim 1.

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by either of Cassatta et al. or EP 610534 and request the Examiner to reconsider and withdraw the §102(b) rejection.

4. Rejection of Claims 1 and 3-4
under 35 U.S.C. §102(b)

The Office Action rejects claims 1 and 3-4 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,576,406 ("Yamamura et al."). The Office Action states:

Yamamura et al. disclose paint comprising of copolymer obtained from monomers comprising alkyl (meth)acrylate and reactive monomer having a group derived from isocyanate group and reactive monomer having a group derived from isocyanate group (col.1, lines 17-20, col.2 lines 1-5 and 32-36, and col.3, lines 7-8 and 32). Attention is drawn to example 13 which discloses copolymer obtained from 57.5 % (115/200) alkyl (meth)acrylate and 32.5 % (65/200) monomer of the formula:



Which is 2-(0-[1-methyl-propylideneamino]carboxyamino)ethyl metacrylate as presently claimed.

In light of the above, it is clear that Yamamura et al. anticipated the present claims.

Applicants respectfully traverse the rejection because Yamamura et al. does not teach the presently claimed new method for

preventing a whitening phenomenon for solvent-borne paints as presently claimed.

Turing to the rule, the Federal Circuit has spoken clearly and at some length on the question of anticipation. Anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Those elements must be expressly disclosed as in the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

But where the claims are drawn to a new method of using either an old or "obvious" composition, wherein the method has unobvious beneficial or useful effects, the new method claims are patentable even though the composition itself could not be patented. Rohm and Haas Company v. Dawson Chemical Company, Inc. et al., 217 USPQ 515 (D.C. S. Texas 1982) (citing In re Shetty, 566 F.2d 81, 195 USPQ 753 (C.C.P.A. 1977); In re Legator, 352 F.2d 377, 147 USPQ 322 (C.C.P.A. 1965)).

In the present application, independent claim 1 recites a method for preventing a whitening phenomenon for solvent-borne paints for paint or ink, which is characterized by comprising a copolymer of 2-50% by weight of a reactive monomer having isocyanate group or an isocyanate-derived group with 98-50% by

weight of other monomer or polymer which is reactable with said reactive monomer.

However, nowhere does Yamamura et al. teach a method for preventing a whitening phenomenon for solvent-borne paints. Yamamura et al. only teaches a paint comprising of copolymer obtained from monomers comprising alkyl (meth)acrylate and reactive monomer having a group derived from isocyanate group and reactive monomer having a group derived from isocyanate group. Nothing in Yamamura et al. relates to a method for preventing a whitening phenomenon for solvent-borne paints. Clearly, Yamamura et al. fails to teach each and every claimed limitation of presently pending claim 1.

Accordingly, Applicants respectfully submit that the presently claimed invention is not anticipated by Yamamura et al. and request the Examiner to reconsider and withdraw the §102(b) rejection.

5. Rejection of Claim 3
under 35 U.S.C. §103(a)

The Office Action rejects claim 3 under 35 U.S.C. §103(a) as being unpatentable over JP 10-158336, U.S. Patent No. 4,219,632 ("Simms"), U.S. Patent No. 4,608,314 ("Turpin et al."), U.S. Patent

No. 4,533,681 ("Cassatta et al."), and EP 610534 any of which in view of U.S. Patent No. 6,479,605 ("Franchina"). The Office Action states:

The disclosures with respect to JP 10-158336, Simms, Turpin et al., Cassatta et al., and EP 610534 in paragraphs 2-4 above are incorporated here by reference. The difference between JP 10-158336, Simms, Turpin et al., Cassatta et al., and EP 610534 and the present claimed invention is the requirement in the claims that the copolymer is obtained from specific reactive monomer.

Franchina et al. disclose the use of copolymer obtained from blocked isocyanate such as 2-(0-[1-methyl-propylideneamino]carboxyamino)ethyl metacrylate in order to promote durability (col.5, lines 38-50 and col.6, lines 1-12).

In light of the motivation for specific monomer disclosed by Franchina, it therefore would have been obvious to one of ordinary skill in the art to use such monomer in the copolymer of JP 10-158336, Simms, Turpin et al., Cassatta et al., and EP 610534 in order to impart durability, and thereby arrive at the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EP 694564 discloses acrylate latex polymer, however, there is no disclosure that the polymer is obtained from reactive monomer having isocyanate group or an isocyanate derived group.

U.S. Patent No. 4,446,175) ("Brixius et al.") disclose paint comprising copolymer obtained from isocyanatoethyl (meth)acrylate, alkyl acrylate, and mercaptan.

WO 93/03070, similar to EP 610534, discloses copolymer obtained from monomer containing isocyanate group and monomer having no functional group capable of undergoing

reaction with the isocyanate group.

U.S. Patent No. 5,015,711 ("Simonet et al.") disclose copolymer obtained from monomer with carboxyl functionality, monomer with no carboxyl functionality, and surfactant monomer, which is obtained by reacting isocyanatoethyl methacrylate and surfactant. There is no disclosure of the amounts of isocyanatoethyl methacryalte and surfactant utilized.

Applicants respectfully traverse the rejection because the secondary reference, Franchina, which is required in the all the rejection over the primary references, is not prior art.

In particular, the captioned application's earliest effective filing date is August 25, 2000, from Japanese Patent Application JP 2000-255720, for which a claim for foreign priority under §119 has been perfected with the enclosed certified English translation. However, Franchina issued well after the earliest effective filing date on November 12, 2002, wherein Franchina has an earliest effective U.S. filing date of May 15, 2001, from continuation application 09/855,395. Clearly, Franchina is not prior art under any provision of §102 and therefore cannot be applied in the outstanding obviousness rejection under §103.

Accordingly, Applicants respectfully submit that the presently claimed invention is unobvious over the cited references and respectfully request reconsideration and withdrawal of the rejections of claims 1-4.

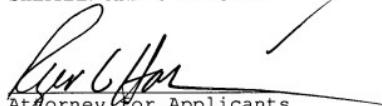
CONCLUSION

In light of the foregoing, Applicants submit that the application is now in condition for allowance. The Examiner is therefore respectfully requested to reconsider and withdraw the rejection of the pending claims and allow the pending claims. Favorable action with an early allowance of the claims pending is earnestly solicited.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:) Group Art Unit: 1714
UEHARA; YAMAZAKI; OHIRA;)
KAWAHITO) Examiner: Callie E. Shosho
Serial No. 09/925,451)
Filed: August 10, 2001)
For: ADDITIVES FOR PAINTS AND INKS

Appendix A

Please amend the claims according to the proposed revision to 37 C.F.R. §1.121 concerning a manner for making claim amendments.

A1
1. (Currently amended) An additive A method for preventing a whitening phenomenon for solvent-borne paints for paint or ink, which is characterized by comprising a copolymer of 2-50% by weight of a reactive monomer having isocyanate group or an isocyanate-derived group with 98-50% by weight of other monomer or polymer which is reactable with said reactive monomer.

2. (Currently amended) The additive method of Claim 1, in which the reactive monomer having isocyanate group is 2-

A1
cont.

isocyanatoethyl methacrylate, 2-iso-cyanatoethyl acrylate or 3-isopropenyl- α,α -dimethylbenzyl isocyanate.

3. (Currently amended) The additive method of Claim 1, in which the reactive monomer having a group derived from isocyanate groups is 2-(O-[1'-methyl-propylideneamino]carboxyamino)ethyl methacrylate, or 2-(O-[1'-methylpropylideneamino]carboxyamino)ethyl acrylate.

4. (Currently amended) The additive method of Claim 1, in which the monomer or polymer reactable with said reactive monomer having isocyanate group or an isocyanate-derived group is an alkyl ester of acrylic acid, alkyl ester of methacrylic acid, alkyl vinyl ether, reactive silicone having methacryloyloxy group, reactive acrylic polymer or butadiene polymer.
